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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,188	03/11/2004	Taiji Ema	960045E	4959
38834 7590 08/01/2008 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER				
DAHIMENE, MAHMOUD				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
08/01/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/797,188

**Applicant(s)**

EMA ET AL.

**Examiner**

MAHMOUD DAHIMENE

**Art Unit**

1792

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,5,19 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,19 and 23-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date 5/8/2008.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections withdrawn***

Objections to claims 19, 23 and 28 are withdrawn in view of applicant's amendments to the claims.

### ***Information disclosure statement (IDS)***

The IDS filed on 5/8/2008 was considered except for the Non Patent Literature Document Cite No. 4, no translation to English was provided.

### ***Claim Rejections - 35 USC § 112 withdrawn***

Rejection of claim 2, and dependent claims (filed on 1/25/2008), under 35 USC § 112 second paragraph is withdrawn in view of the new amendment addressing "the third **etching** step". However, the amendments in claims 3 and 19 made the claimed subject matter, in those particular claims, unclear due to the sequence (or lack of) of the process steps and their correspondence to the affected layers (films).

### ***New Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 and all dependent claims 3, 5, 19 and 23-28, are rejected under 35 U.S.C. 112, second paragraph. Claim 2 recites "A method for fabricating **the** semiconductor device" in the preamble. There is insufficient antecedent basis for the semiconductor device.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

4. Regarding claim 3, the limitation of "in the third step of etching the first insulation film, the opening is opened down to the semiconductor substrate." is in contradiction with claim 2, since claim 2 recites "forming a first insulation film covering the conductor pattern and having a substantially flat surface", and since the conductor pattern is formed over the silicon substrate, and since the fourth insulation layer used as an etch-stop is deposited over the conductor pattern, It appears that both the etch-stop layer (fourth insulation film) and the conductor layer need to be removed first in order for the opening to be able to reach the semiconductor substrate. There is no step describing either the conductor layer and/or the fourth insulation layers are removed.

5. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites **"in the first step of etching the first insulation film**, the third insulation film is etched with the second insulation film as a stopper.". It is not clear how in the step of etching the first insulation film which is underneath the third insulator film the third insulator film is etched, since the third insulator film need to be already removed in order to reach the first insulator film.

6. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 28, which depends on claim 2) recites "in the step of

Art Unit: 1792

forming the hole, an etching rate of the second insulation film at the first step is lower than an etching rate of the third insulation film at the first step and an etching rate of the second insulation film at the second step.”, however, in claim 2 the “first step” is defined as “etching the first insulation film” it is not clear how the second insulation film is etched in the first step since it has been removed in order to reach the first insulation layer. In addition it is not clear if “the first step” is the “first etching step” or “forming the conductor pattern”

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAHMOUD DAHIMENE whose telephone number is (571)272-2410. The examiner can normally be reached on week days from 8:00 AM. to 5:00 PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duy-Vu N Deo/  
Primary Examiner, Art Unit 1792

/M. D./  
Examiner, Art Unit 1792